

An Essay  
on  
The offices of the Peritoneum.

Respectfully Submitted  
To the Faculty of the  
Homoeopathic Medical College  
of Pennsylvania,  
on the

Twentieth day of January  
One thousand eight hundred & fifty three,

by

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of Maine.

Let us look a little more in  
at unpromising as this subject at  
first view appears, it really possesses  
many curious and interesting points.  
Like some other parts of the animal  
economy if regarded only superfi-  
cially, the peritoneum presents a  
merely mechanical aspect, as de-  
void of physiological interest or  
of physical beauty. More closely  
examined it is found to be  
not merely a gross covering of  
the abdominal viscera, but a  
means most wonderfully and  
beautifully adapted to protect  
and preserve in a healthy con-  
dition the organs and systems  
placed within its charge.

Let us look a little more in detail at some of its principal uses.

One of its most apparent offices is to sustain in place and shield from external injury the viscera with which it is in immediate association. The first it accomplishes by means of its numerous folds and reflections forming bands and attachments of curious adaptation. The second by the simple interposition of itself between these viscera and the external world. To these ends it is extensile and elastic, - yielding and reacting like common tendinous tissue. In

the accomplishment of this double purpose it associates these viscera into a brotherhood, — serves as a medium from transmitting some of their blood vessels, and distributes among them of its own warmth and vitality.

Another and most important office of the Peritoneum is to furnish to the visceral surfaces, a profuse, unguent secretion, perfectly adapted to soften and lubricate them and to enable them to glide upon themselves and each other, in their almost ceaseless movement, with facility and without attrition. This it accomplishes principally through the greater Omentum,

By means of this fluid, the viscerai surfaces are also protected against the corroding effects of the acid exhalations which exist in the interior of the abdomen - and by it, through the connection formed by the cellular tissue of the Omentum with that of the duodenum and the colon, the residuum of the chyme is macerated, softened and <sup>helped</sup> sent on its way.

But it has still another and not less vital office. This same omental fluid serves as a storehouse for the superabundant materials of the blood - secreting them in its cells as the honey,

in the comb, and for a similar purpose; namely, against the time of need.

That such receptacles are needed is sufficiently apparent, and that this is one of the offices of the Omentum is to be seen from the fact that certain arteries - the coeliacs - in this course elsewhere follow the free borders of this portion of the membrane, throw off branches which enter its expanded portion and ramify through its substance, where their peculiar connection with the intimate structure of the adipose deposit in that region, fully warrants our conclusion.

According to Malpighio, the  
pelicle covering a globule of the  
omental fat, as shown under the  
microscope, is itself a minute  
omentum — and this first globule  
is made up of numerous smaller  
ones, each possessing its little  
membrane, channelled by minute  
veins and arteries. "These blood  
vessels," says this author, "expand  
like trees into branches, and to the  
extremities of these branches are  
appended the membranous sacci,  
full of the fatty globules. Whether  
all the adipose globules be again  
invested with a pelicle, or not, the  
eye is unable to decide. This much,  
however, can be seen — the globules

are connected to the sides of the branches as the stones of the grape are appended to the stalks."

That the Omentum is thus a depository for the superabundant materials of the Blood is apparent. That, as such, it is drawn upon whenever the Blood has been impoverished in quality by disease, or diminished in quantity by mechanical injury, is equally apparent from the fact that causes such as these produce the certain and sometimes the sudden diminution of this adipose deposit in place by the

From the intimate arrangement of these fatty particles it must

also result that their most interior portion is secreted from the purest materials of the blood, for the grosser blood globules ~~had~~ could not possibly pass these exceedingly minute arteries, or be received back by the equally minute veins into the general circulation.

Thus this Peritoneum, so uninteresting at the first glance, and apparently serving a merely mechanical end, is in reality a tissue of the highest importance — a membrane, the structure of which is held in place by the most beautiful and orderly arrangement of its minute parts —

a preserver of civil harmony  
and comfort - a sort of appen-  
dix to the sanguinary circulation  
- the trustee of a reserved fund  
for future emergencies.